



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,298	12/22/2003	Christopher Ware	CS23792AS	8208
20280	7590	03/31/2008		
MOTOROLA INC 600 NORTH US HIGHWAY 45 W4 - 39Q LIBERTYVILLE, IL 60048-5343			EXAMINER LOO, JUVENA W	
			ART UNIT 2616	PAPER NUMBER
			NOTIFICATION DATE 03/31/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DOCKETING.LIBERTYVILLE@MOTOROLA.COM

ADB035@Motorola.com

### Office Action Summary

**Application No.**

10/743,298

**Applicant(s)**

WARE ET AL.

**Examiner**

Juvena Loo

**Art Unit**

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on January 18, 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### ***Objections***

1. Claim 6 is objected to because of the following informalities: In particular, claim 6 is objected to because it contains the word "stations" twice. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, and 4 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore et al. (Patent Number 4,466,001) in view of Chuah (Patent Number 6,469,991 B1).

Stanwood et al. discloses a method and apparatus for requesting and allocating bandwidth in a broadband wireless communication system comprising:

Regarding claim 1, *a method for scheduling multicast transmissions in a multicast group comprising a plurality of stations* (Stanwood: see Figure 1, 102), *the method to communicate using a wireless local area network (WLAN), said method comprising the steps of:*

*transmitting a first group poll from at least one Quality of Service (QoS) Access Point (QAP) to each station in the multicast group* (Stanwood: see Figure 1, Figure 6, 604 and Figure 8);

*identifying one active station in said multicast group having the authority to transmit; [and inactive stations among said plurality of stations.]* (Stanwood: see Figure 8, 814, 820, and 822; see also "The method proceeds from...CPE the requested bandwidth" in page 9, section 0092);

*transmitting a directed Contention Free (CF) poll from said QAP to said one active station* (Stanwood: see Figures 9 and 10; see also "When the base station detects a request...via an associated connection link" in page 10, sections 0095 through 0097);

*transmitting an inbound data from said one active station to the QAP* (Stanwood: see Figure 10 and "FIG. 10 shows the message...via an associated connection link" in page 10, section 0097).

However, Stanwood does not explicitly disclose the feature: *multicasting an outbound QoS data frame corresponding to said inbound QoS data frame from said QAP to stations in said multicast group.*

Chuah discloses a method for overload control in a wireless communications network comprising the feature:

*multicasting an outbound QoS data frame corresponding to said inbound QoS data frame from said QAP to stations in said multicast group* (Chuah: see Figure 6F,

box 671 and "The packets are buffered...remotes within its cell" in column 9, lines 6 – 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Stanwood et al. by the features, as taught by Chuah. The motivation would have been in allocating bandwidth dynamically based on traffic characteristics and QoS requirements (Chuah: see column 9, lines 42 – 44).

Regarding claim 2, *wherein the step of identifying an active station among said plurality of stations identifies as said one active station a station that transmits, in response to said group poll, an inbound QoS data frame to said QAP* (Stanwood: see "In accordance with...requests in the same slot" in page 9, section 0080).

Regarding claim 4, *wherein said active station is a back-haul interface* (Stanwood: see Figure 1, 116; and Chuah: Figure 2, 238: a backhaul network).

Regarding claim 5, *wherein the steps of identifying an active station comprises executing a back-off algorithm when a collision occurs when two of the stations respond to the first group poll with inbound QoS data frames* (Stanwood: see "In accordance with the ...to resolve contentions" in page 8, section 0080 through page 9, section 0088; and Chuah: column 19, lines 49 – 54: each remote station with packets to send requests access to the access point during uplink initial contention. If some of these

Art Unit: 2616

access requests collide, the colliding remote stations participate in uplink conflict resolution).

Regarding claim 6, *wherein stations of said multicast group which do not seek to transmit to stations in the group do not respond to said first group pool* (Stanwood: see "In accordance with the present...in the same slot" in page 8 section 0080).

Regarding claim 7, *wherein said inbound QoS data frame comprise at least on half duplex voice data frame* (Chuah: column 9, lines 14 - 15 and column 18, lines 50 - 51: the system may be operated in the half-duplex mode and support voice data transmission).

Regarding claim 8, *a system of a wireless local area network (WLAN) used for scheduling multicast transmissions to a multicast group including a plurality of stations* (Stanwood: see Figure 1 and "The preferred embodiment...broadband wireless communication system" in page 3, section 0034; see also "The downlink of the communication system shown in FIG. 1 operates on a point-to-multipoint basis" in page 3, section 0037), *the system comprising:*

*a Quality of Service (QoS) Access Point (QAP) having a back-haul interface* (Stanwood: see Figure 1, 116, back-haul interface), an inbound interface and an

outbound interface (Stanwood: see Figure 1, 106 and 108 and “the central base station 106 includes a sectored active antenna array 108” in page 4, section 0038), and

*a plurality of stations operatively connected to said QAP through one of said back-haul, inbound, or outbound interfaces* (Stanwood: see Figure 1, 110 and “In the system shown in FIG. 1...World Wide Web or Internet” in page 3, section 0035);

*said QAP operative to receive a single poll for a multicast group consisting of at least one of said stations in said plurality of stations* (Stanwood: see Figure 10 and “FIG. 10 shows the message...via an associated connection link” in page 10, section 0097), *and to transmit through said multicast group to identify one active station having the authority to transmit among said plurality of stations of said multicast group* (Stanwood: see Figure 6, 604, Figure 7, and Figure 8; see also “The method proceeds from...CPE the requested bandwidth” in page 9, section 0092), *transmit a directed Contention Free (CF) poll from said QAP to said one active station* (Stanwood: see Figures 9 and 10; see also “When the base station detects a request...via an associated connection link” in page 10, sections 0095 through 0097).

Regarding claim 9, *wherein said QAP comprises a group scheduler* (Stanwood: see “Data for transmission...with condition exists” in page 11, section 0110 through section 0120).

Regarding claim 10, *wherein said one active station transmits half duplex group voice transmissions for the multicast group* (Chuah: see “The scheme of the

invention...full duplex (FDFD) systems” in column 9, lines 13 - 15 and “Among data messages...data packets” in column 18, lines 50 – 53).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Stanwood et al. (US 2001/0038620 A1) in view of Chuah (US 6,469,991 B1), and further in view of Brasic et al. (US 2004/0156350 A1).

Stanwood et al. and Chuah disclose all the claimed limitations as in paragraph 3 above. Stanwood et al. and Chuah do not disclose the feature: *regarding claim 3, further comprising the steps of: transmitting a QoS null frame from said one active station to said QAP; and transmitting a subsequent group poll from said QAP to each station in said plurality of stations.*

Brasic et al. discloses a method for polling a plurality of wireless modems from a base station comprising the feature:

Regarding claim 3,

Stanwood et al. discloses the feature comprises: *transmitting a subsequent group poll from said QAP to each station in said plurality of stations* (Stanwood: see Figure 1, Figure 6, 604 and Figure 8).



Brasic et al. discloses the feature comprises: *further comprising the steps of: transmitting a QoS null frame from said one active station to said QAP* (Brasic: see "In basic polling...all terminals have been polled and then repeats" In page 2, section 0021).

Therefore, the combination of Stanwood et al. and Brasic et al. disclose the feature comprising:

*further comprising the steps of: transmitting a QoS null frame from said one active station to said QAP* (Brasic: see "In basic polling...all terminals have been polled and then repeats" In page 2, section 0021); *and transmitting a subsequent group poll from said QAP to each station in said plurality of stations* (Stanwood: see Figure 1, Figure 6, 604 and Figure 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Stanwood et al. with Chuah by using the features, as taught by Brasic et al. to indicate a remote station does not wish to transmit data (Brasic: see page 2, section 0021).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1 – 10 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

**6. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juvena Loo whose telephone number is (571) 270-1974. The examiner can normally be reached on Monday - Friday: 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Juvena Loo/  
Examiner, Art Unit 2616  
March 18, 2008

/Kwang B. Yao/  
Supervisory Patent Examiner, Art Unit 2616